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ABSTRACT

Using data from a survey of more than 1,900 first-year students at a large research institution, this study applied J.L. Holland's theory of personality and environment to examine the ways in which students view diversity. Holland categories, individual characteristics such as race and gender and interactions with people of color before college significantly predict students' beliefs and attitudes about issues related to diversity at the time they enter college. Descriptive findings provide additional evidence of the widespread segregation that exists within society. More than 7 in 10 white students had no substantive interactions with people of color prior to entering college. This reinforces the assertion that college may be the first, and perhaps the only, opportunity that many students have to interact with someone from a different racial or ethnic background. (Contains 9 tables and 26 references.) (Author/SLD)

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Applying Holland's Typology to the Study of Differences in Student Views About Diversity

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Differences in Student Views About Diversity:

An Application of Holland's Theory

Using data from a survey of more that 1,900 first-year students at a large research institution, this paper applies Holland's theory of personality and environment to examine the ways in which students view diversity. Holland categories, individual characteristics such as race and gender, and interactions with people of color prior to college, significantly predict students' beliefs and attitudes about issues related to diversity at the time that they enter college.

Introduction

Increasingly, we see reflected in institutional mission statements at colleges and universities across the country affirmations that diversity enhances higher education (Alger, 1997). Administrators (Bok, 1982; Rudenstine, 1996), academics (Astone & Nunez-Womack, 1990; Duster, 1993; Gurin, 1999; Hurtado, Milem, Clayton-Pedersen, & Allen, 1999; Milem, in press; Milem & Hakuta, 2000; Smith and associates, 1997; Tierney, 1993), and national educational associations (e.g., see recent initiatives and statements from AACU, AALS, AAMC, AAU, AAUP, ACE) offer compelling arguments about the ways in which diversity expands and enriches the educational enterprise through the benefits that it provides to individual students, to colleges and universities, and to our society and our world. Each of these groups argues that the opportunities students have for learning are enhanced when they attend racially heterogeneous colleges than when they attend colleges that are more homogeneous.

The research on the outcomes of diversity tends to focus more on the educational benefits that accrue to students that result from the interactions that they have with diverse ideas and diverse people while in college rather than on how their pre-college experiences influence their attitudes and beliefs about diversity. Specifically, relatively few of these studies examine student beliefs toward diversity at the time that they enter college. Clearly, students come to college with a set of beliefs and attitudes about diversity that have been shaped by a variety of pre-college socialization contexts including family, friends, schools, and neighborhoods. Studies that can help us to understand the relationship between differences in student attitudes and beliefs and their early socialization experiences can be quite valuable. This study contributes in this area by applying Holland's theory of personality types and environments (1966, 1985) to the study of differences in first-year students' beliefs and attitudes about diversity.

Theoretical Framework

Research suggests that personality plays a critical role in a variety of choices that students make, and in particular, in the choice of college major. Astin (1993) found that students with certain personality characteristics were more likely to choose particular majors. For example, students who rated high on a scale measuring social activism were more likely to major in the social sciences and education. Those students who had artistic inclinations were more likely to major in the fine arts, music, theater, journalism and English. Students scoring high on a hedonism scale were most likely to major in business, nursing, health technologies and secretarial studies. Students who Astin described as leaders were most likely to major in pre-law, communications and military science. Status strivers were most likely to major in architecture and agriculture.

Astin's work on student "types" was heavily influenced by the work that he did with John Holland. Holland's theory (Holland, 1966, 1985) has been applied with some frequency to understand student choice of major, satisfaction, growth and achievement (Feldman, Smart, & Ethington, 1999; Smart, 1987; Smart, 1997; Smart, Feldman, & Ethington, 2000). The basic premise of Holland's theory is that human behavior is a result of the interaction between individuals and their environments. In applying Holland's theory, Smart, et al (2000, p. 33)

suggest that students "choose academic environments compatible with their personality types" and in turn "academic environments reward different patterns of student abilities and interests."

Recent research suggests that congruence between person-environment is critical (Feldman, Smart & Ethington, 1999; Smart, Feldman & Ethington, 2000) to the success of college students. They argue, "congruence of person and environment is related to higher levels of educational stability, satisfaction, and achievement" (Feldman, Smart & Ethington, 1999, p. 643). Based on preferred activities, interests and competencies, Holland has developed six model environments that can be translated into a typology for academic disciplines – realistic, investigative, artistic, social, enterprising, and conventional (Smart, Feldman, & Ethington, 2000).

Realistic environments focus on concrete, practical activities that often use machines and tools. Outputs are often practical, concrete and tangible. Disciplines commonly associated with realistic environments are electrical engineering, mechanical engineering, and military science.

Investigative environments emphasize activities that focus on the creation and use of knowledge. The goal is the acquisition of knowledge through investigation and problem solving. Some of the disciplines that are considered investigative are biology, mathematics, sociology, economics, and civil engineering.

Social environments focus on the healing or teaching of others. They emphasize the acquisition of interpersonal competencies. Disciplines that are commonly associated with social environments are political science, nursing, special education, philosophy and history.

Enterprising environments are oriented toward personal or organizational goal attainment through leadership or manipulation. They emphasize leadership development and reward popularity, self-confidence and aggressiveness. Enterprising disciplines include business, journalism, communications and computer science.

Artistic environments are concerned with creative activities and emphasize ambiguous, unstructured endeavors. These environments encourage the acquisition of innovative and creative competencies. Arts, English, architecture, speech, music and theater are examples of artistic disciplines.

Finally, *conventional* environments focus on meeting requirements or needs through the use of numbers or machines. They emphasize a conventional outlook and are concerned with orderliness and routines. Accounting and data processing are examples of conventional disciplines.

At least two other empirical studies examine the relationship between academic major/career choices and the racial attitudes and beliefs of students. In a test of the implications of Social Dominance Theory, Sidanius, Pratto, Martin, and Stallworth (1991) examined the relationship between the career choice of undergraduate and graduate students and their racial attitudes. "Social Dominance Theory is a theory of the psychological and social forces which contribute to the formation and maintenance of social hierarchies and caste–systems" (Sidanius,

et al, 1991, p.692). These hierarchies result from institutional and individual discrimination. According to Social Dominance Theory, resources are allocated based upon group membership.

Proponents of Social Dominance Theory (Sidanius, et al, 1991) assert that *consensual racial attitudes* are those attitudes which different racial groups share in common. These are differentiated from *dissensual racial attitudes* which are those "racial attitudes which distinguish or separate one group from the other, the myths which one group propagates and which the other group finds degrading and humiliating" (Sidanius, et al, 1991, p. 694). *Dissensual racial attitudes* are viewed to be socially destabilizing under Social Dominance Theory. On the other hand, *consensual racial attitudes* work to reinforce or sustain the social hierarchies proposed in the theory.

While students who attend college do tend to become more liberal in their attitudes over time, students who pursue careers within the "power" professions (i.e., business and law) tend to demonstrate higher levels of consensual racial attitudes than students who prepare for careers in other areas. These findings hold even after controlling for race, gender, and grade point average in the analysis (Sidanius, et al 1991).

Proponents of Social Dominance Theory argue that individuals in the "power" professions are more likely to hold consensual racial attitudes given the fact that these groups are responsible for the allocation of resources and access to these resources (Sidanius, et al 1991). Moreover, there is evidence indicating that individuals who are more likely to discriminate against members of negative reference groups and/or who hold negative racial attitudes are more likely to choose the "power" professions when entering college.

In a test of a variety of factors that influenced changes in students' racial attitudes, Milem (1994) found that academic major at the time of college entry served as a significant predictor of student beliefs about racial diversity in society. Specifically, the analyses examined the impact of college on the relative importance that white students placed on the personal goal of helping to promote racial understanding. However, in this study, Milem found that major/career choice was a more salient predictor for women in the analyses than it was for men.

Women who entered college intending to major in business, the health professions, engineering, or mathematics/statistics were less likely to place value on this goal. Conversely, women who entered college intending to major in education, the humanities, or history/political science were more likely to endorse this personal goal. Men who entered college intending to major in engineering were less likely than their peers to endorse this goal four years after college entry. Conversely, men who entered college undecided about their college major or as an education major were more likely to value this goal.

Milem's analyses examined the relative impact of a variety of collegiate experiences on changes in the relative importance students placed on this goal four years after entering college. The analyses revealed that measures of academic major/career plans four years after entering college also served as predictors of the relative importance that students placed on this goal.

This study builds upon the work of Holland (1966, 1985), Astin (1993), Smart, Feldman, and Ethington (2001), Sidanius, Pratto, Martin, and Stallworth (1991), and Milem (1994) to test the relative impact that measures of college major/career choice have on students attitudes toward campus diversity. We also include measures of student demographic characteristics (gender, race, age), background (first generation college student, high school GPA, high school type, and area where students grew up), and previous levels of interaction with people of color and with whites in our analyses.

Method and Data

This paper uses data from a survey of first-year students at the University of Maryland. One of the primary objectives of the larger study, of which this paper is a part, is to explore how colleges create diverse learning environments and prepare students to live and work in an increasingly complex and diverse democracy. In the summer of 2000, we surveyed Fall 2000 first-year University of Maryland students during orientation sessions. Our efforts yielded data from 2,911 respondents, or 76% of the entering class. Approximately 29 percent of the respondents were students of color (13.1 percent Asian Pacific American, 10.0 percent African American, 4.7 percent Latino/a, and .2 percent Native American) and 50.8 percent were female.

Because college major was of central importance to this study, we removed all students who had not declared a major at the end of their second year. The resulting sample included 1,950 students (See table 1.). Of the 1,950 students 68.3 percent were White, 9.2 percent were African American, 13.7 were Asian/Pacific American, and 8.8 percent were other people of color. In terms of gender, 49.8 percent were male and 50.2 percent were female.

The largest disciplinary category represented was investigative, which made up 35.2 percent of the sample. Social and enterprising majors were each approximately one quarter of the sample. Artistic and realistic majors each represented 6.7 percent of the sample.

Analysis

Our data analyses occurred in three stages. First, we explored basic relationships found in the data using descriptive statistics. Second, we constructed four composites using factor analysis to be used as variables (three dependent and one independent) in the multivariate analyses. Third, we conducted three ordinary least squares regressions.

Descriptive Statistics

Our first set of descriptive analyses examined the relationship between the racial/ethnic background of students and their involvement with diverse peers prior to college. Table 2 shows the proportion of students who indicated they had substantial interactions with people of various racial ethnic groups.

Few Whites report substantial interaction with people of color prior to attending college. Only 26 percent reported substantial interaction with African Americans prior to college. Approximately one-third of the Whites had substantial interaction interactions with APAs. Few Whites had substantial interaction with Latinos/as (16.7 percent) and American Indians (3.6

percent). African Americans were more likely than Whites to report engaging in cross-racial interaction prior to college. Almost two-thirds reported having substantial interaction with Whites. About one in four African Americans (24 percent) reported substantial interaction with APAs and nearly one in three (30 percent) reported substantial interaction with Latinos/as. APAs were most likely to report that they had substantial interaction with Whites (68.5 percent) and other APAs (75.9 percent) prior to college. About one in four APA students indicated that they had substantial interactions with African Americans prior to college.

The next set of descriptive analyses examined the relationship between the racial/ethnic background of students and their plans for participation in different diversity related interactions in college (See Table 3). Regardless of race, most students believe that it was likely that they would get to know individuals from diverse backgrounds while in college. For all four of the racial ethnic groups examined, more than three fourths of the respondents indicated that they intended to get to know individuals from diverse backgrounds.

However, it is important to consider the types of activities students will become involved in that will allow them to get to know individuals from diverse backgrounds. It is in students' assessments of the likelihood of their participation in particular activities that we see significant variation by race. When asked about their intentions to participate in activities reflecting their own cultural background, less than one third of the White students reported that they intended to do so, while 89 percent of African American students and 78 percent of APA students said that they planned to join these groups. When queried about their intentions of taking a course devoted to diversity in their first year, only about one third (36 percent) of the White students stated that they intended to take such a course in their first year. However, two thirds (66 percent) of African American students and just under half (44 percent) of the APA students reported that they intended to take a diversity course in their first year. Only one in four White students indicated that they thought they would join an organization that promotes diversity during their first year of college compared to three out of four African American students and more than half of Asian Pacific American students.

Race is also salient in differentiating students' views about the role of universities' in exposing students to diversity related information and educational activities. More than 90 percent of African American and APA students believed that faculty should incorporate research and readings about different ethnic groups in their classes, while approximately 82 percent of White students supported the inclusion of this information. While less than two-thirds of the White students supported requiring students to take a cultural or ethnic diversity course, approximately 86 percent of the African American students and 72 percent of the Asian Pacific American students supported this requirement. Similarly, students of color were more likely than Whites to express support for a requirement that students participate in a community based experience with diverse populations. While more than 80 percent of the African American students supported this requirement, only 61 percent of the White students did.

Differences in the degree to which students plan to engage in activities that bridge social differences are less dramatic. However, our descriptive analyses suggest that people of color are more likely to work to bridge differences than Whites are. Approximately 60.4 percent of the White students indicated they intended to learn about social groups other than their own,

compared to 72 percent of the African American students and 76 percent of the APA students. When asked whether they planned to work to bridge differences between different social identity groups, 65 percent of the White students agreed or strongly agreed. In comparison, 74 percent of the African American students and 77 percent of the APA students agreed or strongly agreed that they would work to bridge these differences.

In addition to racial differences in student beliefs and plans, we also observed differences across the Holland disciplinary categories (See table 4). The data suggest that students who pursue social and artistic majors are the most likely to report that they plan to participate in diversity related educational activities. Students in social majors were the most likely (47.6 percent) to plan to participate in activities reflecting their own cultural background, followed closely by students in investigative majors (46.6 percent). Students in social and artistic majors were the most likely to plan to take a course devoted to diversity (53.1 percent and 47.2 percent respectively), join an organization that promotes cultural diversity (45.3 percent and 38.1 percent), and get to know others from diverse backgrounds (86.9 percent and 81.9 percent). Across all measures pertaining to student plans for diverse interactions, realistic majors were the least likely of the five Holland major field groups to report that they planned to engage in these activities.

We observed similar differences based upon Holland type regarding students' views about the role of universities offering diversity related educational activities. Approximately 90 percent of the students in the artistic and social types believed that faculty should incorporate research and readings about different ethnic groups into their classes, while only 75 percent of the students in the realistic type supported the inclusion of these perspectives. Three quarters of the students in the artistic and social types believed that students should be required to take a cultural or ethnic diversity course while only 55 percent of the students in the realistic type supported this requirement. Similarly, students from the artistic and social types were more likely than students from the other Holland types to support a requirement for students to work in community based experiences with diverse populations.

Similar to the results of the descriptive analyses using race/ethnicity, disciplinary differences represent by Holland type regarding the extent to which students plan to engage in activities that bridge social differences are less dramatic. However, students from the social type are the most likely to express commitment to bridging social identity differences. Approximately 80 percent of the social majors indicated they intend to learn about groups other than their own, compared to 60 percent of students from the realistic type and 72 percent of the students from the investigative and enterprising major types. When asked whether they intended to work to bridge differences between social identity groups, 77 percent of the social and artistic majors indicated that they would while 65 percent of the students from realistic majors and 73 percent of the students from the enterprising majors agreed or strongly agreed.

Factor Analysis

We used exploratory factor analysis as a data reduction technique to help us identify key constructs that could be used as independent and dependent variables in the regression analyses we did that examined the relative impact of different variables on student attitudes about

diversity. We constructed three scales that we used as dependent variables in our models (A summary of each scale is presented in Table 5).

The first of the scales we constructed represents students' views about their role in bridging differences between social groups. The scale was constructed using responses to items that asked students whether they felt it was important for them to educate others about the social identity group to which they belong, whether they liked to learn about social identity groups different from their own, and whether they wanted to bridge differences between social identity groups. Factor loadings ranged from .75 to .83 and the scale had an alpha reliability of .67. We labeled this scale *Bridging Differences*.

The second scale represented student beliefs about the role of the university in offering diversity related activities. The items in this scale include the extent to which students think that faculty should include readings about different ethnic groups and women in their classes, students should be required to engage in community based experiences working with diverse populations, courses should be offered that help students develop an appreciation for different cultures, students should be required to take a cultural or ethnic diversity course, and opportunities should be available for students from different backgrounds to engage in extensive discussions. The alpha reliability for this scale was .83 and the factor loadings ranged from .73 to .80. We labeled this scale *Importance of University Sanctioned Diversity Activities*.

We developed a third scale representing students' *Plans for Diverse Interactions* while in college. Four items comprise this scale that asked students about the likelihood that they would participate in groups and activities that reflect their own cultural/ethnic background, take a course devoted to diversity issues in their first year of college, join an organization that promotes cultural diversity, and make efforts to get to know others from diverse backgrounds. The factor loadings for this scale ranged from .70 to .84 and it had an alpha reliability of .73.

A fourth scale was developed for use as an independent variable and represented the extent to which students interacted with people of color prior to college. Included in this scale were measures of the amount of interaction students had with Multi-Racial/Ethnic individuals, Latinos/as, African Americans, Asian Pacific Americans, and American Indians. This five-item scale had an alpha reliability of .73 with factor loadings ranging from .53 to .78.

Regression Analysis

Given that there are multiple sources of influence on the attitudes and beliefs of entering students, we constructed a series of blocked hierarchical regression equations to analyze our data. See Table 6 for a description of the variables in the model and their descriptive statistics.

In the first block, we included demographic variables such as age, race/ethnicity, and gender. White served as the omitted category in the regression equations. In the second block, we entered variables assessing other student background characteristics such as whether or not the students was a first generation college student, their high school grade point average, nature of the area where the student grew up (urban, suburban, rural), with urban as the omitted category and type of high school (public, private religious, private nonsectarian), with public as the

omitted category. In the third block, we entered measures of students' pre-college interactions with peers. One variable represented the amount of interaction students had with people of color prior to attending college while the other variable represented the amount of interaction students had with whites. In the final block of variables, we included dummy-coded variables representing the Holland major types. Because so few students in our sample were in majors in the conventional category, only five (realistic, investigative, social, enterprising, and artistic) of the categories were used for these analyses. The investigative category served as the omitted category in each of the regressions that are summarized in the following sections. In addition, we ran the regression analyses changing the omitted Holland category to test for differences between all of the categories. We do not present this additional analysis in table form but discuss findings from it in the sections below.

Researchers (Rosenthal & Rosnow, 1991) suggest that the calculation of effect sizes is helpful when interpreting the results of regression equations. An effect size is the proportion of a standard deviation change in the dependent variable as a result of a one-unit change in a dependent variable. When we standardize all of the continuous measures (both independent and dependent) in our models, the unstandardized coefficients represent effect sizes. An effect size of .10 or less is considered trivial, between .10 and .30 was small, between .30 and .50 is moderate, and greater than .50 is large (Rosenthal & Rosnow, 1991).

Results

Bridging differences

Table 7 shows the unstandardized coefficients for the independent variables predicting bridging differences. As we entered each block of variables into the model, we observed a significant change in the explanatory power of the model. The final model explains just over 15 percent of the variance in students' beliefs about bridging differences. In addition, each block of variables produces a significant change in the R square.

When we examine our final model, the race/ethnicity and gender variables appear to have the greatest impact. People of color were significantly more likely to report that they intended to engage in activities that help to bridge differences. Women were significantly more likely than men to report that they planned to engage in these activities.

Only two background variables were significant predictors of the dependent variable. While high school grade point average was significantly positively related with the outcome variable, its effect size was trivial. Students who attended a private high school were significantly more likely to report that they intended to work to bridge social differences.

The amount of interaction students had with people of color prior to college was significantly related to their interest in working to bridge social identity differences. Each standard deviation increase in interactions with people of color resulted in 20 percent of a standard deviation change in the dependent variable. Using the traditional effect size standards, this represents a small, yet non-trivial change in the dependent variable.

Several Holland categories served as a statistically significant predictor of bridging differences. Students in social majors were significantly more likely than students in investigative, social and enterprising majors to report that they wanted to become involved in activities that bridge social identity differences. They were 20 percent of a standard deviation more likely than investigative and realistic majors to make plans to bridge differences. They were approximately 15 percent of a standard deviation more likely than enterprising majors to make plans to bridge differences. Social majors were not significantly different from artistic majors in predicting the dependent variable.

When we examine the coefficients across blocks, only one variable experienced substantive changes as blocks of variables were entered into the model. The coefficient for African Americans dropped from .576 to .456 after the racial interaction variables were entered. This suggests that African American beliefs about bridging differences are likely to be mediated by the interactions they have with diverse peers prior to college.

Support for the university offering diversity activities

The model predicting students' views regarding the role of the university in offering diversity related educational opportunities produced results similar to the first model. The final regression model explained nearly 20 percent of the variance in the dependent variable and each block of independent variables produced a significant change in the R square. Once again, race and gender had the greatest predictive power. African Americans and APAs were significantly more likely than Whites to indicate that they felt the university should offer diversity-related educational opportunities to students. Women were more likely than men were to believe that the university should provide these offerings.

While a substantively small effect, first generation college students were significantly less likely to report that universities should offer these opportunities. High school grade point average was positively related to the dependent variable, but its substantive impact was trivial.

The extent to which students interacted with people of color prior to college was significantly related to the dependent variable. The more students interacted with people of color, the more likely they were to support the university's diversity related initiatives.

Students in social majors were significantly more likely than those in investigative, realistic and artistic majors to support diversity-related activities. Our additional analyses revealed that social majors also were significantly more likely than artistic majors to support diversity initiatives. The effect sizes for these coefficients were considered small, yet non-trivial, ranging from .16 to .252.

Plans for diverse interactions

This equation explained more than 25 percent of the variance in the dependent variable and each block of variables produced a significant change in the R square. As with the other two models, people of color were more likely than Whites to plan engage in activities in college where they would have the opportunity to interaction with diverse peers. African Americans, APAs and other people of color were significantly more likely than Whites to report that they

planned to engage in diverse interactions while in college. Women were more likely than men to report that they had such plans.

As with the previous equations, the interactions students had with people of color prior to college significantly predicted the dependent variable. The more students interacted with people of color prior to college, the more likely they were to indicate that would interact with diverse peers while in college.

Two of the Holland categories served as important predictors of the dependent variable. Students who were social majors were significantly more likely than both investigative and realistic majors to report that they planned to engage in diverse interactions while in college. In addition, social majors were significantly more likely than artistic majors to make plans to engage in diverse activities. Realistic majors were the least likely of all majors to plan to engage in diverse interactions while in college.

Discussion and Implications

The findings of this study have implications for extending educational theory and informing educational practice and educational policy-making. First, our descriptive findings provide additional evidence of the widespread segregation that persists within our society (e.g., see Orfield & Easton, 1996). In our study, more than seven in ten Whites had had no substantive interactions with people of color prior to entering college. This reinforces the assertion that college may be the first, and perhaps only, opportunity that many students have to interact with someone from a different racial/ethnic background (Gurin, 1999; Hurtado, Milem, Clayton-Pedersen, & Allen, 1998, 1999; Milem & Hakuta, 2000).

It is through the interactions students have with diverse others that we disrupt the cycle of the perpetuation of segregation that is so persistent in our society (Braddock, 1980). The findings of our analyses present findings similar too the earlier research done in the area of school desegregation (e.g., see Braddock, 1980, 1985; Braddock & McPartland, 1982 & 1989; Braddock, McPartland, & Trent, 1984; Braddock, Crane, & McPartland, 1984; Braddock & Dawkins, 1981). Students in our sample who had more frequent interactions with people of color prior to college were likely to have more favorable views of diversity.

The findings of this study extend our understanding of the impact that personality and disciplinary affiliation have on college students. Moreover, additional evidence that establishes the relationship between students' major/career choice and their attitudes and beliefs regarding race and diversity is evident in our findings. Our findings indicate that the Holland types do have utility in predicting differences in students' attitudes and beliefs toward diversity prior to college entry. Similar to Milem's (1994) earlier longitudinal analyses, subsequent analyses using these data and follow-up data that is currently being collected, will analyze the impact that extended study in particular major fields while in college has on these and other important outcomes two years after entering college. Given the significant differences in student views about diversity based upon major field, our findings suggest that students in selected disciplines could benefit from instructional activities designed to help them understand and engage differences.

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Table 1. Race/ethnicity, gender and Holland student major categories.

	Race/Ethnicity				Gender		Total	
Holland	White	African American	Asian/Pac. American	Other	Male	Female	%	N
Realistic	67.9	5.3	14.5	12.2	89.3	10.7	6.7	131
Investigative	65.5	10.5	15.9	8.2	53.4	46.6	35.2	686
Artistic	79.2	6.9	6.9	6.9	32.3	67.7	6.7	130
Social	69.3	12.9	6.0	11.8	27.9	72.1	25.5	498
Enterprising	68.3	5.5	19.8	6.3	61.0	39.0	25.9	505
Total %	68.3	9.2	13.7	8.8	49.8	50.2	100.0	
Total N	1,331	180	267	172	972	978		1,950

Table 2. Percent indicating substantial interaction with various racial/ethnic groups.

	Race/Ethnicity				
Substantial interaction with...	White	African American	Asian/Pacific American	Other	Total
Whites	98.5	63.1	68.5	89.4	90.5
African Americans	26.4	89.9	25.8	42.1	33.3
Asian Pacific Americans	32.0	24.4	75.9	40.5	38.1
Latinos/as	16.7	29.5	14.3	42.6	19.8
American Indians	3.6	5.5	2.8	8.0	4.0

Table 3. Select descriptive statistics by race/ethnicity

	Race/Ethnicity				
	White	African American	Asian/Pacific American	Other	Total
"Likely" or "very likely"					
Participate in activities reflecting own cultural-ethnic background	30.4	88.8	77.7	56.9	44.5
Take a course devoted to diversity issues in your first year of college	36.3	66.3	44.1	51.8	41.5
Join an organization that promotes cultural diversity	26.3	73.5	52.9	45.2	35.9
Make efforts to get to know individuals from diverse backgrounds	78.0	94.2	82.3	83.2	80.5
"Support" or "strongly support"					
Incorporate research about different ethnic groups and women	81.7	95.7	92.4	87.1	84.8
Requiring community-based experience with diverse populations	61.3	83.5	66.7	67.3	64.4
Offering courses that developappreciation for own & other cultures	85.2	93.4	92.3	91.8	87.4
Requiring students one cultural/ethnic diversity course	62.6	85.5	72.0	67.8	66.3
Opportunities for discussion for students from different backgrounds	85.4	91.2	91.5	89.7	87.1
"Agree" or "strongly agree"					
Educate others about the social identity groups to which I belong	43.3	49.5	50.5	61.2	48.1
Learn about social identity groups different from my own	60.4	72.3	75.7	80.1	72.2
Bridge differences between social identity groups	65.3	73.6	76.8	76.5	73.0

Table 4. Select descriptive statistics by Holland disciplinary categories.

	Holland Categories					
	Realistic	Investig	Artistic	Social	Enterp	Total
"Likely" or "very likely"						
Participate in activities reflecting own cultural-ethnic background	33.1	46.6	36.0	47.6	43.8	44.5
Take course devoted to diversity issues in 1st year of college	21.9	37.2	47.2	53.1	39.2	41.5
Join an organization that promotes cultural diversity	24.0	34.2	38.1	45.3	31.5	35.9
Make efforts to get to know individuals from diverse backgrounds	71.9	79.8	81.9	86.9	77.1	80.5
"Support" or "strongly support"						
Incorporate research about different ethnic groups and women	74.8	84.0	90.1	90.4	81.5	84.8
Requiring community-based experience with diverse populations	56.3	62.1	74.8	74.8	56.2	64.4
Offering courses that develop appreciation for own & other cultures	77.5	86.2	92.7	93.1	84.6	87.4
Requiring students one cultural/ethnic diversity course	55.4	62.8	72.7	73.3	64.8	66.3
Opportunities for discussion for students from diff't backgrounds	79.3	87.1	89.0	91.2	84.2	87.1
"Agree" or "strongly agree"						
Educate others about the social identity groups to which I belong	43.3	49.5	50.5	61.2	48.1	52.0
Learn about social identity groups different from my own	60.4	72.3	75.7	80.1	72.2	73.8
Bridge differences between social identity groups	65.3	73.6	76.8	76.5	73.0	73.9

Table 5. Factor Analysis

Constructs	Factor Loadings
Interactions with people of color	
Multi-Racial/Multi-Ethnic individuals	0.782
Hispanics/Latinos/Chicanos	0.769
African Americans/Blacks	0.740
Asian Americans/Pacific Islanders	0.622
American Indians/Alaskan Natives	0.529
Alpha=.73	
Bridging differences	
important for me to educate others about the social identity groups to which I belong	0.746
like to learn about social identity groups different from my own	0.834
want to bridge differences between social identity groups	0.747
Alpha=.67	
Importance of diversity activities	
Incorporating writings and research about different ethnic groups and women into courses	0.800
Requiring students to complete a community-based experience with diverse populations.	0.800
Offering courses to help students develop an appreciation for their own and other cultures.	0.797
Requiring students to take at least one cultural or ethnic diversity course in order to graduate.	0.794
Offering opportunities for intensive discussion between students with different backgrounds and beliefs.	0.725
Alpha=.83	
Plans for diverse interactions	
Participate in groups and activities reflecting your own cultural-ethnic background	0.698
Take a course devoted to diversity issues in your first year of college	0.745
Join an organization that promotes cultural diversity	0.840
Make efforts to get to know individuals from diverse backgrounds	0.699
Alpha=.73	

Table 6. Descriptive statistics of independent variables include in the models.

	Mean	Standard Deviation
FEMALE	0.50	0.50
BLACK	0.09	0.29
APA	0.14	0.34
Other	0.09	0.28
AGE*	17.84	0.48
First Generation	0.11	0.32
High School GPA*	3.80	0.41
Suburb	0.73	0.44
Small/Rural	0.17	0.38
Religious HS	0.11	0.32
Private HS	0.03	0.17
Interactions with people of color	0.00	1.00
Interactions with whites*	3.88	0.40
REALISTIC	0.07	0.25
ARTISTIC	0.07	0.25
SOCIAL	0.26	0.44
ENTERPRISING	0.26	0.44

*Unstandardized descriptives presented. Variables were standardized for multivariate analsysis.

Table 7. Unstandardized coefficients for model predicting student beliefs about bridging differences

	Block			
	I	II	II	IV
(Constant)	-0.384**	-0.212*	-0.250**	-0.289**
Demographics				
Female	0.439**	0.435**	0.415**	0.368**
African American	0.592**	0.576**	0.456**	0.458**
Asian/Pacific American	0.520**	0.483**	0.451**	0.469**
Other	0.348**	0.353**	0.243**	0.230*
Age	0.031	0.031	0.040	0.038
Background				
First generation college		-0.081	-0.070	-0.071
HS GPA		0.048+	0.043+	0.057*
Suburb		-0.153+	-0.094	-0.110
Small/Rural		-0.280**	-0.141	-0.145
HS-Religious		0.009	0.075	0.082
HS-Private		0.247+	0.219	0.248+
Racial Interactions				
Interaction-people of color			0.198**	0.198**
Interaction-Whites			-0.007	-0.008
Major-Holland categories				
Realistic				0.008
Artistic				0.092
Social				0.200**
Enterprising				0.048
R-squared	0.101	0.109	0.147	0.152
R-squared change	0.101**	0.009*	0.037**	0.006*

+p<.10, *p<.05, **p<.01

Table 8. Unstandardized coefficients for model predicting student beliefs higher education providing opportunities for diverse interactions.

	Block			
	I	II	II	IV
(Constant)	-0.451**	-0.307**	-0.331**	-0.330**
Demographics				
Female	0.690**	0.691**	0.674**	0.613**
African American	0.565**	0.563**	0.495**	0.494**
Asian/Pacific American	0.247**	0.223**	0.225**	0.251**
Other	0.211**	0.214**	0.125	0.112
Age	0.006	0.003	0.010	0.007
Background				
First generation college		-0.238**	-0.226**	-0.231**
HS GPA		0.042+	0.036	0.047*
Suburb		-0.114	-0.080	-0.089
Small/Rural		-0.203*	-0.104	-0.103
HS-Religious		0.051	0.096	0.097
HS-Private		0.010	-0.020	0.003
Racial Interactions				
Interaction-people of color			0.164**	0.163**
Interaction-Whites			0.026	0.025
Major-Holland categories				
Realistic				-0.119
Artistic				0.133
Social				0.158**
Enterprising				-0.037
R-squared	0.155	0.165	0.191	0.198
R-squared change	0.155**	0.010**	0.026**	0.007**

+p<.10, *p<.05, **p<.01

Table 9. Unstandardized coefficients for model predicting students' plans for diverse interactions.

	Block			
	I	II	II	IV
(Constant)	-0.505**	-0.459	-0.492**	-0.514**
Demographics				
Female	0.513**	0.510**	0.492**	0.415**
African American	0.974**	0.964**	0.944**	0.936**
Asian/Pacific American	0.658**	0.630**	0.610**	0.637**
Other	0.482**	0.482**	0.377**	0.366**
Age	0.048*	0.047*	0.055**	0.052*
Background				
First generation college		-0.113+	-0.098	-0.104
HS GPA		0.042+	0.038+	0.057**
Suburb		-0.016	0.029	0.010
Small/Rural		-0.143	-0.013	-0.015
HS-Religious		0.037	0.093	0.098
HS-Private		0.112	0.092	0.137
Racial Interactions				
Interaction-people of color			0.205**	0.206**
Interaction-Whites			0.009	0.005
Major-Holland categories				
Realistic				-0.144+
Artistic				0.088
Social				0.260**
Enterprising				0.033
R-squared	0.197	0.203	0.242	0.254
R-squared change	0.197**	0.006*	0.039**	0.012**

+p<.10, *p<.05, **p<.01

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